



DMS 543 | ARC 598  
Media Robotics I: Physical Computing  
Assistant Professor Mark Shepard  
Wednesday 1:00–4:40pm  
246 Center for the Arts  
Fall 2009

MediaRobotics I: Physical Computing is the first in a series of courses that exposes students to concepts and techniques that enable them to begin appreciating, designing, constructing and programming behaving artifacts for complex environments.

This course introduces basic concepts and techniques for creating objects, spaces and media that sense and respond to their physical surroundings and the actions and events that transpire there. Moving beyond the interface paradigm of screen, keyboard and mouse, physical computing enables alternate models for interaction with (and through) computers that afford more subtle and complex relations between a range of human and non-human actors. Combining readings, presentations and discussions on the theory of computer enabled art forms with a series of hands-on technical workshops in computing methods and techniques, the course provides a critical context for emerging forms of experimental practice.

Topics include fundamental ideas in computing (languages, representation of thought), embodied interaction (situated actions, responsive systems), practical aspects of hardware design (electricity, electronics, microprocessors, components, sensors and actuators), functional programming (variables, datatypes, control structures, functions, objects, communication protocols), and an introduction to various material fabrication techniques (wood, metal, plastics, elastomers, fabrics).

This is an introductory course open to artists, architects, engineers and all other media makers. No prior expertise in computing required. Curiosity about how things work is a must.

For more information, visit: <http://cva.ap.buffalo.edu/courses/f07/dms543/>